

Methyl-Fuel — A New Clean Source of Energy, David Garrett, T. O. Wentworth, Vulcan-Cincinnati, Inc., 1329 Arlington, Cincinnati, Ohio 45225

A new liquid fuel has been developed with all the advantages of natural gas or fuel oil, but which is actually less polluting than natural gas. This liquid fuel, designed for use in power plants, large industrial furnaces and boilers and for gas turbines, is a mixture of predominately methanol with controlled percentages of higher alcohols. The fuel has been named METHYL-FUEL, a trademark registered for Vulcan-Cincinnati, Inc. The METHYL-FUEL process produces liquid fuel with essentially zero sulfur, nitrogen and metals content, at costs competitive with very low sulfur fuel oils and with imported LNG on a "Btu delivered to burner" basis. Actual combustion tests showed  $\text{NO}_x$  emissions in flue gas are lower than that for natural gas. METHYL-FUEL may be regasified to methane if desired, at costs competitive with naphtha gasification. METHYL-FUEL may also be added to gasoline as an effective octane improver and gasoline extender replacing lead additives for this purpose. The technology for METHYL-FUEL production and regasification is reviewed and results from combustion tests are discussed.